

GRANOVSKIY, G.I., doktor tekhn. nauk, prof.

Methods for the investigation and selection of cutting conditions
for automatic production lines. Vest. mashinostr. 43 no.10:
46-55 0 '63. (MIRA 16:11)

GRANOVSKIY, G.I., doktor tekhn.nauk, prof.

Durability of cutting tools as an initial parameter for
calculating cutting conditions. Vest.mashinostr. 45
no.8:59-64 Ag '65.

(MIRA 18:12)

GEL'FMAN, A. Ya.; GRANOVSKIY, G. L.; KHEYFETS, L. Ya.

Simple radiographic method for dactyloscopic investigations.
Atom. energ. 17 no.1:71 J1 '64. (MIRA 17:7)

BERKOVICH, M.P.; TOMSON, G.V., redaktor; GRANOVSKIY, G.M., redaktor; ~~HEKKER~~,
O.G., tekhnicheskiy redaktor

[Tables for calculating fixed price of scrap iron and ferrous metal
wastes according to the price-list introduced on January 1, 1950]
Raschetnye tablitsy zagotovitel'noi stoinosti loma i otkhodov chernykh metallov po preiskurantu, vvedennomu s 1 ianvaria 1950 g. Mo-
skva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metal-
lurgii, 1952. 36 p. [Microfilm] (MIRA 9:3)
(Scrap metal industry)

GRANOVSKIY, GRIGORIY MOISEYEVICH

Granovskiy, Grigoriy Moiseyevich

324

Balans metallurgicheskogo zavoda (Balance Sheet of the Metallurgical Plant) Moscow, Metallurgizdat, 1957. 184 p. 3,000 copies printed.

Ed.: Ryabin'kiy, B. Ya.; Ed. of Publishing House: Khutorskaya, Ye., S.; Tech. Ed.: Mikhaylova, V.V.

PURPOSE: This book is aimed at the administrative and bookkeeping personnel of the metallurgical industry. It is suggested that this book may also be of value to like personnel in other industries, as well as to VUZ and technical school students.

COVERAGE: This book contains basic bookkeeping information necessary to analyze the balance sheets of metallurgical and other plants. For details see T/C. No personalities are mentioned.

TABLE OF
CONTENTS:

Introduction

5

Card 1/5

Balance Sheet of the Metallurgical Plant	324
Ch. I. The Balance Sheet and Cost Computation as Methods of Bookkeeping	9
Assets of an industrial enterprise and their classification	9
The balance sheet	10
Cost computation	35
Ch. II. Preparation of a Balance Sheet for an Industrial Enterprise	43
Ch. III. Fixed Capital, Computation and Analysis	52
Computation and place in balance sheet	52
Maintenance and major repair	57
State of fixed capital as reflected in balance sheet	60

Card 2/5

Balance Sheet of the Metallurgical Plant	324
Ch. IV. Raw Material and Supplies, Computation and Analysis	64
Computation and place in balance sheet	64
Loans by State Bank, computation and place in balance sheet	73
Accounts with suppliers, computation and place in balance sheet	78
Analysis of on-hand material and supplies as reflected in balance sheet	85
Ch. V. Labor and Wages: Computation and Analysis	90
Labor and wages, computation	90
Accounts with workers and employees, computation and place in balance sheet	95
Analysis of wage-fund expenditures as reflected in balance sheet	100

Card 3/5

Balance Sheet of the Metallurgical Plant	324
Ch. VI. Production Costs, Computation and Analysis	104
Production expenses and computation of unit cost	104
Analysis of production costs	128
Ch. VII. Marketing of Finished Product, Computation and Analysis	135
Computation and place in balance sheet	135
Analysis of production marketing	141
Ch. VIII. Cash Assets, Bank Accounts, and Special Funds	147
Cash assets, computation and place in balance sheet	147
Transactions on account, computation and place in balance sheet	153
Debits and credits, computation and place in balance sheet	155

Card 4/5

Balance Sheet of the Metallurgical Plant	324
Debit and credit analysis	160
Special funds, reckoning and place in balance sheet	164
Ch. IX. Profit and Loss, Computation and Analysis	172
Computation and place in balance sheet	172
Analysis of financial state of enterprise as reflected in balance sheet	174

AVAILABLE: Library of Congress

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6/30/58

Card 5/5

GRANOVSKIY, G.M.

"Production accounting and calculations in industries manufacturing
refractory materials" by I.N. Perlov. Reviewed by G.M. Granovskii.
Ogneupory 22 no.11:527-528 '57. (MIRA 11:1)

(Refractory industry--Accounting)
(Perlov, I.N.)

SKORUBSKIY, Nikolay Ivanovich; KIRZHNER, D.M., prof., retsenzent; SOSEDOV, O.O., gornyy inzh., retsenzent; GRAHOVSKIY, G.M., starshiy kon-sul'tant, red.; AKKHANGEL'SKAYA, M.S., red.izd-va; KARASEV, A.I., tekhn.red.

[Calculations for mines of enterprises engaged in ferrous metallurgy] Kal'kuliatsiia na rudnikakh chernoi metallurgii. Izd.3., perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 189 p. (MIRA 12:4)

1. Moskovskiy gornyy institut (for Kirzhner). 2. Upravleniye bukhgalterskogo ucheta Ministerstva finansov SSSR (for Granovskiy). (Mining industry and finance)

GRANOVSKIY, Grigoriy Moiseyevich; FEL'DMAN, Yakov Iosifovich; CHURILOVICH, L.M., red.; EVENSON, I.M., tekhn.red.

[Accounting in ferrous metals plants] Bukhgalterskii uchet na zavodakh chernoi metallurgii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 111 p.

(MIRA 13:12)

(Steel industry--Accounting)

VALUYEV, Aleksandr Iosifovich; SKOROKHODOV, Arkadiy Aleksandrovich;
GRANOVSKIY, G.M., retsenzent; LUCHINSKIY, Sh.P., red.;
LUCHEKO, Yu.V., red.izd-va; TURKINA, Ye.D., tekhn.red.

[Accounting and analysis of the administrative operations of
a metallurgical plant] Buhgalterskii uchet i analiz kho-
ziaistvennoi deiatel'nosti metallurgicheskogo zavoda. Sverdlovsk,
Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii.
Sverdlovskoe otd-nie, 1960. 447 p. (MIRA 14:3)
(Steel industry--Accounting)

GARETOVSKIY, Nikolay Viktorovich; GRANOVSKIY, G., red.; LEEDEV, A.,
tekhn. red.

[Enterprise fund; new order for its formation and utilization]
Fond predpriatiia; novyi poriadok obrazovaniia i ispol'zova-
niia. Moskva, Gosfinizdat, 1961. 43 p. (MIRA 15:2)
(Industrial management)

PERLOV, Isaak Naumovich; GRANOVSKIY, G.M., red.

[Calculation and analysis of the economic activity of a refractories] Uchet i analiz khoziaistvennoi deiatel'nosti ogneupornogo zavoda. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 335 p. (MIRA 15:1)
(Refractories industry--Accounting)

GRANOVSKIY, Grigorij Moiseyevich; MAZURKEVICH, M., red.; LEBEDEV, A.,
~~tekhn. red.~~

[Methods for checking the reliability of accounting reports]
Metody proverki dostovernosti bukhgalterskoi otchetnosti; v
pomoeshch' finansovym i bankovskim rabotnikam. Moskva, Gos-
finizdat, 1962. 138 p. (MIRA 17:1)

SKORUBSKIY, Nikolay Ivanovich; GRANOVSKIY, G.M., otv. red.;
GOLUHYATNIKOVA, G.S., red. izd-va; SHKLYAR, S.Ya., tekhn. red.

[The balance sheet of a mining enterprise] Balans gornogo pred-
priatiia. Moskva, Gosgortekhizdat, 1962. 147 p.
(MIRA 15:6)

(Mineral industries—Accounting)

KARAKOZ, Ivan Ivanovich; GRANOVSKIY, G.M., red.; TELEGINA, T.,
tekhn. red.

[Daily economic analysis of the work of enterprises]
Bzhednevnyi ekonomicheskiy analiz raboty predpriiatii.
Moskva, Gosfinizdat, 1963. 86 p. (MIRA 16:12)
(Industrial management) (Accounting)

BASMANOV, Ivan Antonovich; GRANOVSKIY, G.M., otv. red.

[Problems in accounting for production expenditures]
Voprosy ucheta zatrat na proizvodstvo. Moskva, Izd-vo
"Finansy," 1964. 106 p. (MIRA 17:4)

GRANOVSKIY, Iosif Froymovich; YUDIN, Petr Alekseyevich; ATTOPOVICH,
~~M. M. Sverdlicheskiy redaktor~~

[Experience of sinter-machine operators at the A.K.Serov
factory] Opyt agglomeratchikov zavoda im. A.K.Serova. Moskva,
Gos. nauchno-tekhn izd-vo lit-ry po chernoi i tsvetnoi
metallurgii, 1955. 40 p.
(Sintering) (MIRA 8:7)

Distr: 4E2c

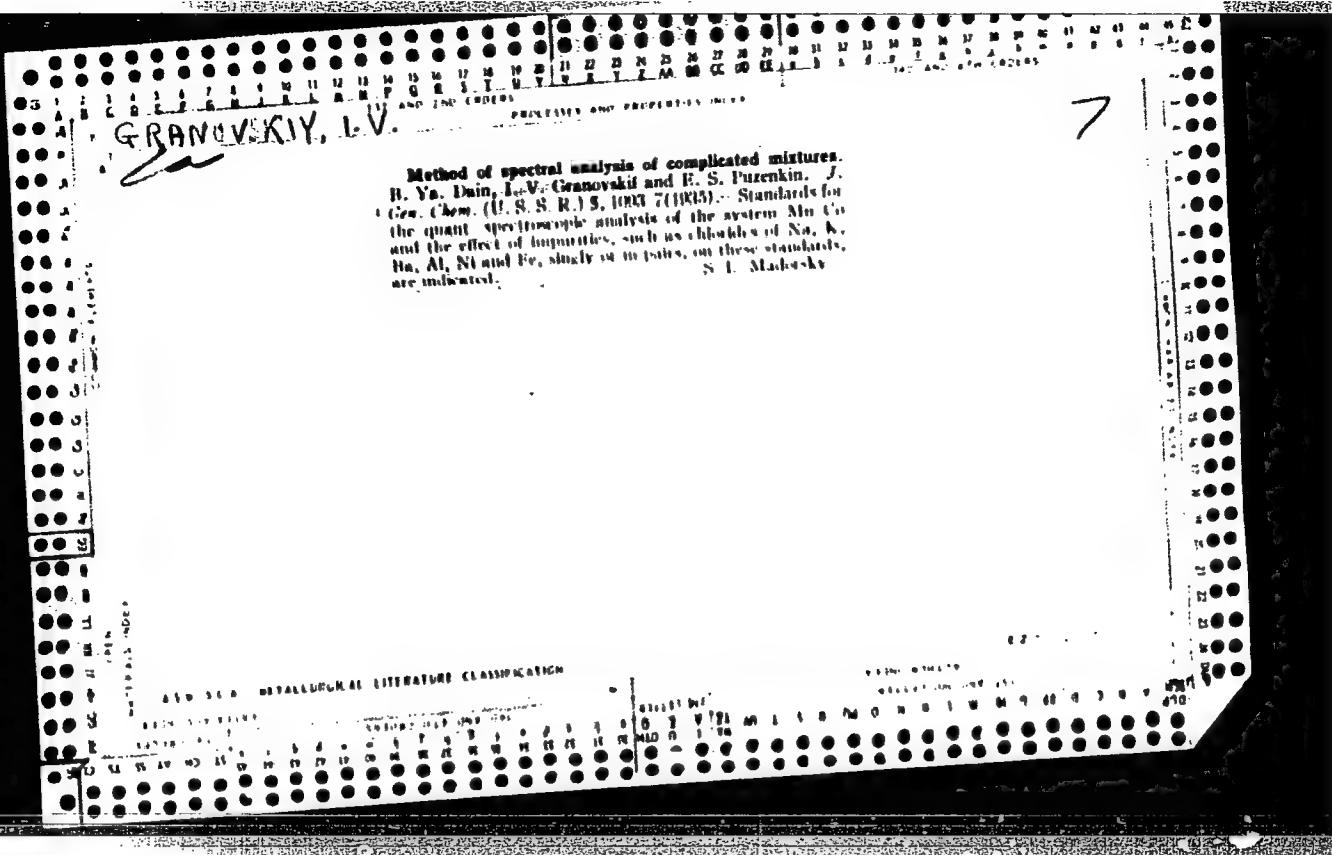
Activated agglomerate of magnetic iron ore V. A.

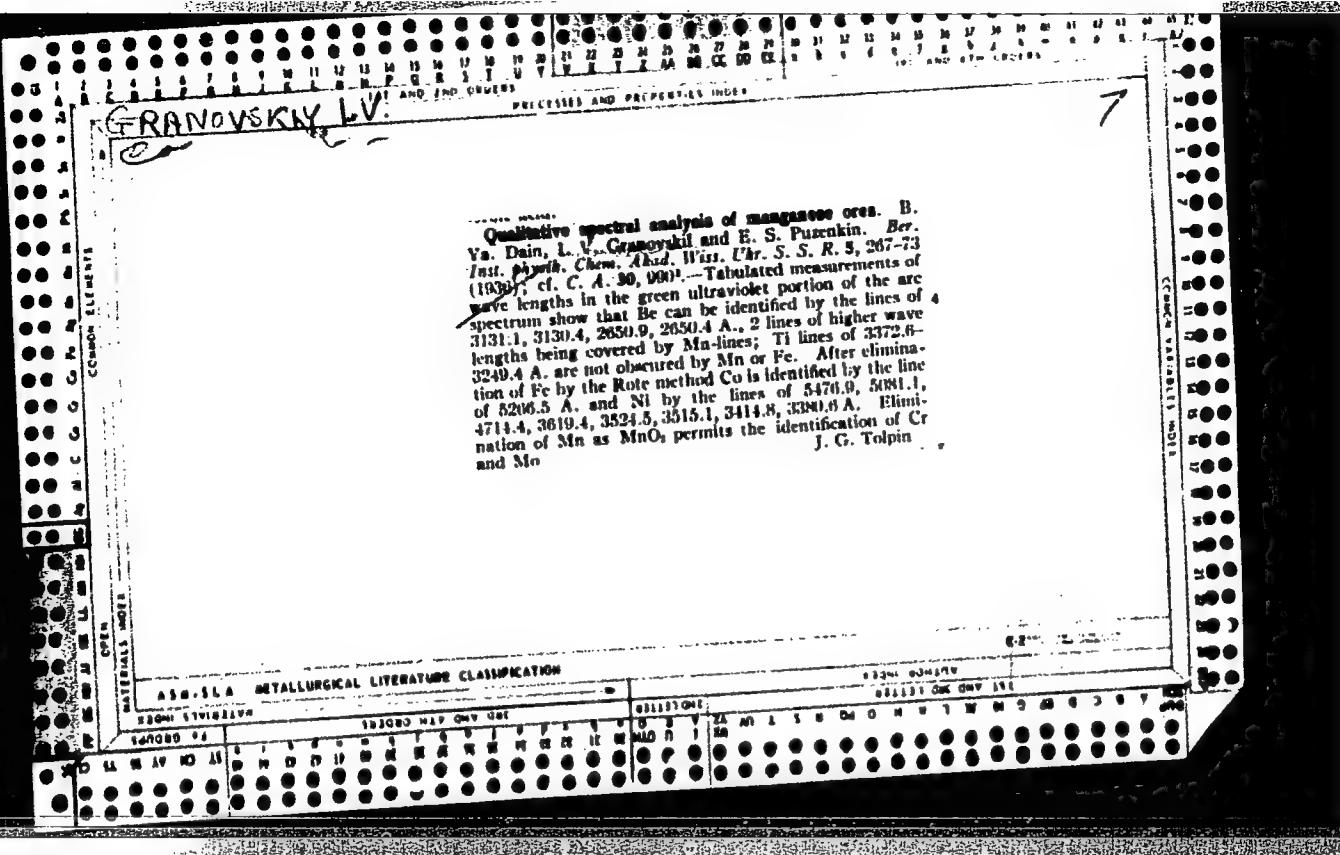
Sokol, M. K. Lukashenko, I. F. Gavrilov, and V. V.

Bulgakov. Shoria Nauch. Trudov. 1973, No. 1, p. 103.

USSR. 1973, No. 4, 65-120. Refer.

Abstract: By spraying a fine spray of water on a layer of Fe ore during agglomeration, the water reacts with the Fe₂O₃ and H₂O₂, and reduces a considerable amount of the Fe₂O₃ to FeO, producing a more porous aggregate with greater surface area. The consumption of coke varies from 17.3% of the charge (± 5%) of coke fines to 27-30% for 18% of coke fines. For 80% iron ore with an input of 5-20% of coke fines the consumption of C varies from 2 to 14.8%, depending on the vacuum, the degree of reduction of the iron oxides, and the rate of spraying. The formation of up to 40-60% of ferrous silicate in activated agglomerate contg. baked-in C is compatible with high chem. activity and mechanical strength. Use of the water spray increased the capacity of the sintering plant by 50-85%. Use of the activated agglomerate in the blast furnaces increased the capacity by 14% and decreased coke consumption by 14%.





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USSR/Metals - Analysis, Slags

Nov 50

"Fluoride Method for Determination of Calcium Oxide in the Open-Bearth and Blast-Furnace Slags," I. V. Granovskiy, F. G. Druzhinin, Metallurgical Plant imeni I. V. Stalin

"Zavod Lab" No 11, pp 1304-1307

Method, where sodium fluoride is used during slag-dissolving process, shortens anal time to 20-25 min. Possibility has been established for using porcelain instead of platinum dishes. Advantage of method is possibility of Ca detn from sep sample, including

USSR/Metals - Analysis, Slags (Contd)

Nov 50

detn in insol silicates, which, in regular course of anal, require long fusing operation. Accuracy is quite satisfactory and amounts to $\pm 2\text{-}3\%$ of quantity to be detd.

180772

180772

"Solubility of Open'hearth and Blast-Furnace Slags and Its Use in the Rapid Analysis of Slags." Cand Chem Sci, Dnepropetrovsk State U, Dnepropetrovsk, 1954.
(RZhKhim, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

USSR/Chemistry - Spectral analysis

Card 1/1 Pub. 43 - 68/97

Authors : Granovskiy, I. V., and Kuz'mina, N. P.

Title : Spectral analysis of open-hearth and blast-furnace slag from solutions

Periodical : Izv. AN SSSR. Ser. fiz. 13/2, page 285, Mar-Apr 1954

Abstract : A method was developed for spectral analysis of open-hearth and blast-furnace slag by converting the latter into a solution. Results obtained by this spectral analysis method are briefly described. One USSR reference (1950).

Institution : The I. V. Stalin Metallurgical Plant, Stalinsk

Submitted :

Category : USSR/Optics - Optical Methods of Analysis. Instruments

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 5166

K-7

Author : Granovskiy, I.V., Kuz-mina, N.P.

Title : Spectral Analysis of Blast-Furnace and Open-Hearth Slags in Solutions

Orig Pub : Zavod. laboratoriya, 1954, 20, No 4, 436-440

Abstract : No abstract

Card : 1/1

GORSHKOV, G., tekhnik (Sverdlovsk); GRISHCHENKO, E. (Aktyubinsk);
GRANOVSKIY, L., instruktor; IVANNIKOV, A.; BERDYUGIN, V., gornyy
inzh.; KIL'DIBEKOV, V.; GORELIK, M., inzh.; ATKOCHAITIS, Ye.
[Atkocaitis, E.] (Vil'hyus); CHERTILIN, V. (Bavly, Tatarskaya ASSR);
DZHURAYEV, U. (Fergana)

Exchange of news and practice. Izobr.i rats. no.2:18-19 F '62.
(MIRA 15:3)

1. Ural'skiy zavod tyazhelogo mashinostroyeniya (for Gorshkov).
2. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov remontno-mekhanicheskogo zavoda "Bol'shevik", g. Aktyubinsk (for Grishchenko).
3. TSentral'nyy Sovet Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Granovskiy).
4. Predsedatel' oblastnogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Ivannikov).
5. Vneshtatnyy konsul'tant oblastnogo konsul'tatsionnogo punkta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov, g. Kemerovo (for Berdyugin).
6. Zaveduyushchiy otdelom promyshlennosti gazety "Leninskiy put'", g. Slobodskoy Kirovskoy obl. (for Kil'dibekov).
7. Otdel kapital'nogo stroitel'stva predpriyatiya teplovyykh setey upravleniya energetiki Soveta narodnogo khozyaystva BSSR, g. Minsk (for GORELIK).
(Technological innovations)

ABDULLAYEV, A. A.; GRANOVSKIY, M. S.; NABIYEV, I. A.; FEYDER, A. M.

Transmitting code-pulse telemetering device. Priborostroenie
no.10:14-15 0 '62. (MIRA 15:10)

(Telemetering)

GRANOVSKIY, M.S.

Increasing the interference proofness of discrete telemechanical
communications by means of a two-threshold receiver. Za tekhn. prog.
3 no.9:5-8 S '63. (MIRA 16:10)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

GRANOVSKIY, M.S.

Static indicator of even numbers. Izv. vys. ucheb. zav.; neft' i
gaz 6 no.2:98-100 '63. (MIRA 16:5)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova.
(Oil fields—Electronic equipment) (Remote control)

GRANOVSKIY, M.S.

Optimal threshold reception of frequency combination codes. Izv.
vys.ucheb.zav.; neft' i gaz 6 no.9:93-94, 1993, p. 163.
(MIRA 17:2)
1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

L 62748-55 EWT(d) Pac-4/Pae-2/Pj-4 GS

ACCESSION NR: AT5013037

UR/0000/64/002/000/0074/0077

AUTHOR: Nabiyev, I. A. (Baku); Granovskiy, M. S. (Baku)

TITLE: Chain-ring coding method

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskому kontrolyu i metodam

elektricheskikh izmerenij. 4th, Novosibirsk 1964. Tr. nauchno-tekhnicheskogo

lektricheskikh izmerenij, tr. nauchno-tekhnicheskogo konferentsii po

elektricheskikh informatsionnykh sistem. Sistemam upravleniya i avtomatiki.

po elektricheskym izmereniyam i elektricheskim informatsionnym sistemam.

1. Measuring techniques, transactions of the conference v. 2. Theory of

information measurement systems. Automatic control systems. Electrical

measurment of nonelectrical quantities). Novosibirsk, Redizdat Sib. ord.

AN SSSR, 1964, 74-77

TOPIC TAGS: error correcting code, chain ring code

ABSTRACT: A coding method is considered which adds a correcting ability to the binary code without many adjoined symbols; this is a general constructive method for t -error-correcting codes. The minimum code distance is $d = \log_2 b$, where

Card 1/2

L 62748-65

ACCESSION NR: AT5013037

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b is the number of pulse indicants. The method provides this number of correctible errors:

b = 2	4	8	16	32	64	128
d = 1	2	3	4	5	6	7
t = 0	0	1	1	2	2	3

The method of conversion of the source binary code into the new code shows that an $(m + 1)$ -th group repeats the first group; hence, the code chain is a closed ring. Characteristics of the codes constructed by the new method are briefly considered. The necessity for many pulse indicants is noted as a disadvantage of the method. Orig. art. has: 1 figure, 4 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 17Nov64

ENCL: 00

SUB CODE: DP

NO REF SOV: 000

OTHER: 003

Card 2/2

ROZHKO, F.; GRANOVSKII,

Visual aids for farm mechanization schools. Prof.-tekhn.
obr. 19 no.8:25 Ag '62. (MIRA 15:12)
(Farm mechanization—Study and teaching)

NEYELOV, O.; GENDE-ROTE, V.; ZEL'MA, G.; RUYKOVICH, V.; STANOVOV, A.;
GRANOVSKIY, N.; RED'KIN, M.; KHLEBNIKOV, A.; PORTER, L.; KOPOSOV, G.

Let's talk about your snapshots. Sov.foto 23 no.1:42-45 Ja '63.
(MIRA 16:5)

1. Chlen moskovskoy fotosektsii Soyuza zhurnalistov SSSR (for Neyelov).
2. Fotokorrespondenty TASS (for Gende-Rote, Granovskiy, Red'kin,
Porter). 3. Fotokorrespondenty zhurnala "Sovetskaya zhenshchina"
(for Zel'ma, Stanovov). 4. Fotokorrespondent zhurnala "Sovetskiy
Soyuz" (for Ruykovich). 5. Predsedatel' Moskovskogo fotokluba
(for Khlebnikov). 6. Fotokorrespondent zhurnala "Ogonek"
(for Koposov).

(Photography)

GRANOVSKIY, N.Ye., inzh.

Use of polymers in the Moscow Locomotive Repair Plant. Zhel.
(MIRA 18:2)
dor. transp. 46 no.5:78-81 My '64.

KHRISANOV, A.G., inzh.; GRANOVSKIY, N.Ye., inzh.

Reliability of electric trains in operation. Zhel. dor. transp.
46 no.8:38-41 Ag '64. (MIRA 17:11)

1. Nachal'nik Moskovskogo lokomotivoremontnogo zavoda (for Khrisanov).

BERNESHENOVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener; GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVAHDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.H., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; MBIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURENIN, B.N., dotsent; AKSENNOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ALEXHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNINGARD, K.A., kandidat tekhnicheskikh nauk; BOROVAY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VINYICHENKO, N.G., dotsent, kandidat ekonomiceskikh nauk;

(Continued on next card)

HEMESHEVICH, I.I.----(continued) Card 2.
VASIL'YEV, V.P.; GONCHAROV, N.G., inzhener; DERIBAS, A.T., inzhener;
DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH,
B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh
nauk; ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk;
ZABELLO, M.L., kandidat tekhnicheskikh nauk; IL'IN, K.P.,
kandidat tekhnicheskikh nauk; KARPTNIKOV, A.D., kandidat tekhnicheskikh
nauk; KAPLUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, F.P.,
professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh
nauk; KUCHURIM, S.P., inzhener; LEVASHOV, A.D., inzhener;
MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV,
M.S., inzhener; MUDYL', O.M., inzhener; NIKITIN, V.D., professor,
kandidat tekhnicheskikh nauk; PADHYA, V.A., inzhener; PANTELEYEV, P.I.,
kandidat tekhnicheskikh nauk; PETROV, A.P., professor, doktor tekhnicheskikh
nauk; POGOROZHENKO, V.V., professor, doktor tekhnicheskikh
nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGEYEV,
Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh
nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener;
TALDAYEV, F.Ya., inzhener; TIKHONOV, K.K., kandidat tekhnicheskikh
nauk; USHAKOV, N.Ya., inzhener; USPENSKIY, V.K., inzhener; FEL'DMAN,
E.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener;
KHOKHLOV, L.P., inzhener; CHERHOMORDIK, G.I., professor, doktor
tekhnicheskikh nauk; SHAMAYEV, M.F., inzhener; SHAPIRKIN, B.I.,
inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor;
TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh
nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh

(Continued on next card)

BENESHEVICH, I.I.--- (continued) Card 3.

nauk, redaktor; MARKOV, M.V., inzhener, redaktor; KALININ, V.K., inzhener, redaktor; STEPANOV, V.N., professor, redaktor; SIDOROV, N.I., inzhener, redaktor; OMRONIMUS, B.Ye., kandidat tekhnicheskikh nauk, redaktor; ROBML', R.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii spravochnik zheleznych dorog. Moskva, Gos. transp.zhel-dor. izd-vo. Vol.10. [Electric power supply for railroads] Energosnabzhenie zheleznykh dorog. Otv.red. toma K.G. Markvardt. 1956. 1080 p. Vol.13.

[Operation of railroads] Eksploatatsiia zheleznykh dorog. Otv. red. toma R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)
(Electric railroads) (Railroads--Management)

GRANOVSKIY, R. G.

GIRSHGOHN, M.S.; GRANOVSKIY, R.G.

Renewing the assortment of silk fabrics. Tekst. prom. 17 no.3:14-
18 Mr '57. (MLRA 10:4)
(Textile fabrics)

GRANOVSKII, R. G

Teplosilovoe khoziaistvo zheleznodorozhnogo transporta. The heat-power economy in railroad transportation. Dopushchено Ministerstvom vysshego obrazovaniia SSSR v kachestve uchebnogo posobiiia dlia institutov zheleznodorozhnogo transporta. Moskva, Gos. transp. zheleznodorozh. izd-vo. Pt. 1. Kotel'nve ustanovki. 1950. 368 p.

DLC: Slavic unclass.

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

KUDRYAVTSEV, D. S.; GRANOVSKIY, R. G.

New silk fabrics manufactured by the Shcherbakov Combine.
Tekst. prom. 23 no.3:3-7 Mr '63. (MIRA 16:4)

1. Direktor Shelkovogo kombinata imeni Shcherbakova (for Kudryavtsev). 2. Nachal'nik khudoshestvennogo byuro Shelkovogo kombinata imeni Shcherbakova (for Granovskiy).

(Synthetic fabrics)

GRANOVSKIY, Roman Grigor'yevich, professor; PINCHUK, G.A., kandidat
tekhnicheskikh nauk, redaktor; KHITROV, P.A., tekhnicheskiy redaktor

[Boiler installations] Kotel'nye ustavovki. Izd. 2-oe, perer. i
dop. Moskva, Gos.transp.shel-dor.izd-vo, 1957. 344 p. (MIRA 10:9)
(Boilers)

GRANOVSKIY, R.G., prof.; POKALNIK, A. I., dotsent

Natural gas as fuel for boiler plants. Trudy MIIT no.125:149-165
'60. (MIRA 13:10)

(Natural gas) (Boilers)

GRANOVSKIY, S.A.

KOVALEV, N.N., laureat Stalinskoy premii; ANOSOV, F.V.; BUGRIN, S.K.;
GARKAVI, Yu.Ye.; GRANOVSKIY, S.A.; ORGO, V.M.; ORLOV, I.V.; USTINOV,
B.M.; GAMZE, Z.M., laureat Stalinskoy premii, dots., retsenzent

[New turbines at the Dnieper Hydroelectric Power Station] Novye
turbiny Dneprovskoi gidroelektrostantsii im. V.I.Lenina. Pod red.
N.N.Kovaleva. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.
lit-ry, 1951. 127 p.
(Dnieper Hydroelectric Power Station)
(Hydraulic turbines)

FITERMAN, Ya.P.; GRANOVSKIY, S.A., redaktor; VORONETSKAYA, L.V.,
tekhnicheskij redaktor.

[Assembling and repair of hydraulic turbines] Montazh i remont
gidroturbin. Leningrad, Gos.energeticheskoe izd-vo, 1952. 462 p.
(Hydraulic turbines) (MLRA 8:3)

GRANOVSKIY, S.A.; ORGO, V.M.; SMOLYANOV, L.G.

[Construction of hydroturbines and calculation of their parts] Konstruktsii
gidroturbin i raschet ikh detalei. Leningrad, Gos.nauchno-tekhn.izd-vo ma-
shinostroit.lit-ry [Leningradskoe otd-nie] 1953. 391 p. (MLRA 6:8)
(Water wheels)

GRANOVSKIY, S.A.

Granovskiy, S.A., Orgo, V.M., and Smolyarov, L.G., "General Information on Control Systems for Water Turbines," in their book *Konstruktsii gidroturbin i raschet ikh detaley* [Designs for Water Turbines and Breakdown for their Components], Moscow and Leningrad, Mashgiz, 1953, Chapter 8, Pages 351-375, 25 figures.

GRANOVSKIY, S. A.

"Investigation of the Design of Hydroturbine Distributors."
Cand Tech Sci, Leningrad Polytechnical Inst imeni M. I. Kalinin,
Min of Higher Education USSR, Leningrad, 1955. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions
(14)

GRANOVSKIY, S.A., kandidat tekhnicheskikh nauk.

Construction of hydraulic turbines abroad. Energomashinostroenie
no.7:28-31 J1 '56. (MLRA 9:10)

(Hydraulic turbines)

GRANOVSKIY, T.G.A.

SHCHEGOLEV, Gleb Stepanovich; GARKAVI, Yudel' Yel'yevich; SMIRNOV, M.I.,
dotsent, retsenzent; ORGO, V.M., inzhener, retsenzent; GRANOVSKIY,
~~SIA~~, kandidat tekhnicheskikh nauk, redaktor; VASIL'YEVA, V.I.,
redaktor izdatel'stva; GOFMAN, Ye.K., redaktor izdatel'stva;
POL'SKAYA, R.G., tekhnicheskiy redaktor

[Hydroturbines and their adjustment] Gidroturbiny i ikh reguliro-
vanie. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry.
1957. 349 p.
(Turbines) (MIRA 10:10)

EDEL', Yury Udovich; VAKHRAHEYEV, B.A., inzh., retsenzent;
GRANOVSKIY, S.A., kand. tekhn. nauk, red.; MITARCHUK,
G.A., red.izd-va; SHCHETININA, A.V., tekhn. red.

[Bucket hydroturbines; theory, study, calculations] Kov-
shovye digroturbiny; teoriia, issledovanie, raschet. Mo-
skva, Mashgiz, 1963. 206 p. (MIRA 16:5)
(Waterwheels)

GRANOVSKIY, S. A., kand. tekhn. nauk

Development of hydraulic-turbine designs in the Leningrad Metal-
working Plant (22d Congress of the CPSU). Energomashinostroenie
ll no. 3:10-14. Mr '65. (MIRA 18:6)

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000516520020-0

GRANOVSKIY, S.A., kand. tekhn. nauk

Turbines of the Krasnoyarsk Hydroelectric Power Station.
[Trudy] LMZ no.10:15-23 '64. (MIRA 18:12)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000516520020-0"

LEVITSKAYA, B.G., kandidat meditsinskikh nauk; GRANOVSKIY, S.G. (Khar'kov)

Examination of the capacity for work in coronary insufficiency.
Vrach.delo no.8:859-861 Ag '57. (MLRA 10:8)

1. Ukrainskiy tsentral'nyy nauchno-issledovatel'skiy institut
ekspertisy trudospособности i organizatsii truda invalidov
(CORONARY ARTERIES--DISEASES)
(DISABILITY EVALUATION)

SOV/131-57-10-19033

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 86 (USSR)

AUTHORS: Anisiforov, V.P., Granovskiy, S.P., Vasil'chikov, M.V.

TITLE Helical Rolling of Round Periodically Recurrent Profiles, Balls, and Gears (Poperechno-vintovaya prokatka kruglykh periodicheskikh profiley, sharov i shesteren)

PERIODICAL: V sb.: Ratsionalizatsiya profiley prokata, Moscow, Profizdat, 1956, pp 296-318

ABSTRACT: The TsNIITMash has developed a production process for the rolling (R) of round periodically recurrent shapes. Appx. 10-30% saving of metal has been attained in this way. The R is performed by three rolls, tapered or disc-type, at an angle of 120° to each other in the working stand of the mill. As the billet advances, the rolls converge and separate in accordance with the shape of a repeater guide, and the helical rolling process is performed. The use of longitudinal tension on the billet makes it impossible for porousness to develop in the axial zone, and this is confirmed by appropriate tests of the mechanical properties and structure. In addition, the fiber structure follows the external shape of the product. The R results in a rise in the

Card 1/2

SOV/137-57-10-19033

Helical Rolling of Round Periodically Recurrent Profiles, Balls and Gears

mechanical properties and this makes it possible to increase the load on the product. A 2-roll helical rolling mill with helical pass grooves is used to produce balls 1-2" in diam for roller bearings, as well as the production of 40-80 mm milling balls. These mills are analogous to piercing mills for tubing. When used to manufacture ball-bearing balls, the output capacity of such a mill is 3 times as great as that of a horizontal upsetter and affords metal savings of 15-20%. In manufacturing milling balls, the labor involved is cut to a fifth or a sixth. In addition, a description of 2 industrial gear-R mills is presented. Gear manufacture by R makes for better metal in the gear crown, as the fibers of metal in the tooth are not cut but bent to comply with the tooth profile. The strength of the teeth is 50% higher than in milled gears.

S.G.

Card 2/2

~~GRANOVSKIY, S.P., kandidat tekhnicheskikh nauk; YEFANOV, V.I., inzhener;~~
~~GROMOV, A.A., inzhener.~~

Steel ball rolling. Stal' 16 no.4:333-337 Ap '56. (MIRA 9:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tyazhelego mashinostroyeniya.
(Rolling (Metalwerk) (Ball bearings))

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000516520020-0

ANISIFOROV, V.P., kandidat tekhnicheskikh nauk; GRANOVSKIY, S.P., kandidat
tekhnicheskikh nauk.

Rolling ball bearings. Minka i zhiss' 23 no.4:49-50 Ap '56.
(Ball bearings) (Rolling (Metalwork)) (MIRA 9:7)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000516520020-0"

PHASE I BOOK EXPLOITATION

494

Smirnov, V. S.; Anisiforov, V. P.; Vasil'chikov, M. V.; Granovskiy, S. P.; Kazanskaya, I. I.; Kuz'min, A. D.; Mekhov, N. V.; Pobedin, I. S.

Poperechnaya prokatka v mashinostroyenii (Cross Rolling in the Machine-building Industry) Moscow, Mashgiz, 1957. 375 p. 4,500 copies printed.

Ed.: (title page): Tselikov, A. I., Corresponding Member of the USSR Academy of Sciences, and Smirnov, V. S., Doctor of Technical Sciences, Professor; Ed. (inside book): Kamnev, P. V.; Ed. of Publishing House: Leykina, T. L.; Tech. Ed.: Sokolova, L. V.; Managing Ed. of the Leningrad Branch of Mashgiz: Bol'shakov, S. A., Engineer.

PURPOSE: This book is intended for process engineers and machine designers engaged in the field of metalworking.

COVERAGE: The book contains a systematic discussion of the theory of cross rolling and helical cross rolling, and presents generalized conclusions from theoretical and experimental research work carried out, and experience gained in machine-building and metallurgical plants in the USSR. The cross-rolling processes, which are considered by the author as having wide potentialities, are currently used in several Soviet plants for the manufacture of bearing rolls and rollers,

Card 1/9

Cross Rolling in the Machine-building (Cont.)

494

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000516520020-0
mill balls, bearing rings, bushings and various periodic shapes such as crankshafts. The ball- and gear-rolling processes developed by TsNIITMASH are considered a major Soviet achievement. Ball-rolling is said to be replacing the manufacture of balls by pressing, increasing productivity two to seven times, and saving 10 to 25 percent in expensive alloyed steel. Gear-rolling is a current development project in the USSR. Rolled-gears are reported to have been successfully produced to grade 2 accuracy, with a class 7-10 surface finish. Methods for determining rolling forces, stresses, moments and power, based on modern concepts of the theory of plasticity and strength of materials are discussed, and formulas derived. The author states that the mechanical properties of parts press formed, or machined from periodic rolled stock, are considerably higher than those made from conventional plain rolled stock, not to mention a 20 to 30 percent saving in material. The development of the theoretical principles and technological processes of cross-rolling and helical cross rolling in the USSR is said to have been carried on intensively since 1942. This theory was developed by V. S. Smirnov on the basis of experiments conducted at the Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute) and later at the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute). The development of machinery and equipment for cross-rolling and helical cross rolling was supervised by A. I. Tselikov at the TsNIITMASH - Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya (Central Scientific Research Institute of Technology and Machinery). Card 2/9

Cross Rolling in the Machine-building (Cont.)

494

2. Determining contact area between work and rolls	13
3. Width limitations for contact area between work and rolls	16
4. Draft limitations in cross rolling	20
5. Deformation and stress distribution in cross rolling between plain surface rolls	22
6. Deformation and stress distribution in cross rolling between beaded rolls	29
7. Deformation and stress distribution in helical cross rolling	33
8. Deformation and stress distribution in piercing	37

Ch. II. Basic Regularity Patterns Obtained From Experimental Data in Forging, Cross Rolling and Helical Cross Rolling of Round Bodies

41

1. Forging of round bodies	--
2. Cross rolling of bodies of solid cross section between plain-surface rolls	47
3. Cross rolling of hollow bodies between plain-surface rolls	72
4. Cross rolling between shape rolls	77
5. Helical cross rolling between conical rolls	82
6. Helical cross rolling in shape rolls [Die rolling]	88

Card 4/9

Cross Rolling in the Machine-building (Cont.)

494

7. Rolling in three-roll mills	102
8. Comparison of experimental data	105

Ch. III. Analytical Solution of the Problem of Stress Distribution in Forging and in Cross and Helical Cross Rolling of Solid Round Bodies

108

1. Presentation of the problem	--
2. Two-dimensional treatment of stress problem in cylindrical coordinates for solid bodies	111
3. Boundary conditions and equalities for stresses in areas exposed to direct action of tool	115
4. Boundary conditions in areas not exposed to direct action of tool	119
5. The critical radius	126
6. More precisely defined boundary conditions and equalities for stresses in cross rolling	128
7. Additional considerations on stress distribution in forging	135
8. Stress distribution in helical cross rolling with tension	137
9. Calculation of deformation of a billet in cross rolling between plain-surface rolls	138
10. Determining the size of the critical draft and of the cavity formed in the work under rolling action	139

Card 5/9

Cross Rolling in the Machine-building (Cont.)

494

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000516520020-0
Ch. IV. Analytical Solution of the Problem of Stress Distribution in Cross and Helical Cross Rolling of Hollow Bodies

141

1. Presentation of the problem	--
2. Two-dimensional treatment of stress problem in cylindrical coordinates for a hollow body	142
3. Boundary conditions and equalities for determining stresses in areas in contact with rolls in rolling hollow bodies without mandrel	143
4. Conditions for transition from omnidirectional nonuniform elongation to contraction due to compression. The critical value of I.D. to O.D. ratio	149
5. Boundary conditions and equalities for determining stresses in rolling thin-walled bodies without mandrel (simplified theory)	155
6. Boundary conditions and equalities for determining stresses in rolling thin-walled bodies with mandrel	158
7. Boundary conditions and equalities for estimation of stresses in rolling bodies with extra thin walls	163

Card 6/9

Cross Rolling in the Machine-building (Cont.)

494

PART II - HELICAL ROLLING IN SHAPE ROLLS [DIE ROLLING]

Ch. V. Technological Process and Equipment for Die Rolling	170
1. Mills for rolling bearing balls	--
2. Mills for rolling balls for crushers	178
3. Rolling of bearing balls	193
4. Design of rolls with helical grooves for rolling balls	200
5. Rolling of balls for crushers	213
6. Cold rolling of balls	217
7. Rolling of billets for barrel rollers for spherical roller bearings	225
8. Rolling of shaped tubular stock	233
9. Rolling of billets for press-forming of connecting rods	243
Ch. VI. Kinematics, Pressure on Rolls, Moments and Power of Rolling in Helical Shape Rolls [Die Rolling]	248
1. Conditions required for the grip of the work piece	--
2. Slip between work and rolls	250
3. Forces and moments in helical cross rolling between plain rolls	252

Card 7/9

Cross Rolling in the Machine-building (Cont.)

194

4. Forces and moments in helical cross rolling between helically rimmed rolls	256
5. Forces and moments in ball rolling	268

PART III - ROLLING ON THREE-ROLL MILLS

Ch. VII. Equipment and Technological Process of Rolling on Three-Roll Mills	275
---	-----

1. Three-roll die-rolling mills	--
2. Process of rolling on three-roll mill	279
3. Roll design	288
4. Accuracy of rolling on three-roll mills	293

Ch. VIII. Pressure on Rolls, Moments and Power in Rolling on Three-roll Mills	296
---	-----

1. Rolling force in rolling	--
2. Pressure exerted on rolls by work in rolling on three-roll mills	304
3. Moment and power of rolling	308
4. Power consumption in rolling on three-roll mills	312

Card 8/9

PART IV - ROLLING OF SPUR GEARS 494

Ch. IX. Equipment and Technological Process of Spur-gear Rolling	315
1. Mills for rolling gears	--
2. Basic operations of the technological process of gear rolling	321
3. Basic parameters of the technological process of gear rolling	326
4. Quality of rolled gears	336
Ch. X. Kinematics, Pressure on Rolls, Moments and Power of Spur-gear Rolling	348
1. Kinematics of Spur-gear rolling	--
2. Relation between the angle of bite and rate of feed	352
3. Contact area between rolls and work	356
4. Pressure exerted by work on rolls	357
5. Torque of rolls	358
6. Experimental determination of forces, moment and power for spur-gear rolling	361
Bibliography	369

AVAILABLE: Library of Congress (TB 340.T 7447)

Card 9/9

GQ/fal
30 August 1958

Increasing Labor Productivity in Machine Building (Voprosy povysheniya proizvoditel'nosti truda v mashinostroenii) Gosudarstvennoye nauch-tekh. izdat. mashinostroitel', literature, Moscow, 1957. 511 pp.

¶ (Table of Contents authors below)

This collection presents a comparative tech. and economic analysis of most effective methods and industrial processes for obtaining high labor productivity in machine building. Output may be stepped up by further standardization of machine tools, materials, and production methods; drawing on unused potentials. Covers all stages of planning and production as performed in modern plants of USSR, actual experience, and new methods are discussed.

ANISIFOROV, V. P., GRANOVSKIY, S. P., "Use of Die-Rolling Methods," p. 289.

SHOR, Emmanuil Romanovich. Prinimeli uchastiye: GRANOVSKIY, S.P., kand.tekhn. nauk; SOM'KIN, M.A., kand.tekhn.nauk; SOLODUKHO, Ya.Yu., inzh.; KOZLOV, B.M.; POLYUCHIN, P.I., prof., doktor tekhn.nauk, ratsent; KOROLEV, A.A., red.; OZIRETSKAYA, A.L., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[New rolling mill processes] Novye protsessy prokatki. Moskva, Gos. nnuchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 385 p. (MIRA 13:1)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt
(for Solodukho).
(Rolling (Metalwork))

36

PHASE I BOOK EXPLOITATION

SOV/5799

Unksov, Ye.P., Doctor of Technical Sciences, Professor, Ed.

Sovremennoye sostoyaniye kuznechno-shtampovochnogo proizvodstva (Present State of the Pressworking of Metals) [Moscow] Mashgiz, 1961. 434 p. 5000 copies printed.

Ed. of Publishing House: A.I. Sirotin; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on the Hot Working of Metals: S.Ya. Golovin, Engineer.

Title: Kuznechno-shtampovochnoye proizvodstvo v SSSR (The Pressworking of Metals in the USSR) by: A.V. Altykis, D.I. Berezhkovskiy, V.F. Volkovitskiy, I.I. Girsh (deceased), L.D. Gol'mann, S.P. Granovskiy, N.S. Dobrinskiy, A.I. Zimin, S. L. Zlotnikov, A.I. Kaganovskiy, P.V. Lobachev, V.N. Martynov, Ye.N. Mesh-nin, G.A. Navrotskiy, Ya.M. Okhrimenko, G.N. Rovinskiy, Ye.A. Stosha, Yu.L. Rozhdestvenskiy, N.V. Tikhomirov, Ye.P. Unksov, V.F. Shcheglov, and L.A. Shofman; Eds: Ye.P. Unksov, Doctor of Technical Sciences, Professor, and B.V. Rozanov.

Title: Kuznechno-shtampovochnoye proizvodstvo v ChSSR (The Pressworking of Metals in the Czechoslovak SR) by: S. Burda, F. Hradil, F. Drastik, F. Zlatohlavek

Card 1/8

36

Present State of the (Cont.)

SGV/5799

Z. Kejval, V. Krauz, F. Kupka, F. Majer, K. Marvan, J. Novák, J. Odchmal,
K. Paul, B. Šummer, M. Honz, J. Častka, V. Šindelář, and J. Šolc; Eds.:
A. Nejepsa and M. Vlk.

PURPOSE: This book is intended for engineers and scientific personnel concerned
with the pressworking of metals.

COVERAGE: Published jointly by Mashgiz and CNTL, the book discusses the present
state of the pressworking of metals in the USSR and the Czechoslovak Socialist
Republic. Chapters were written by both Soviet and Czechoslovak writers. No
personalities are mentioned. There are 129 references: 98 Soviet, 16 English,
8 German, 5 Czech, and 2 French.

TABLE OF CONTENTS:

PRESSWORKING IN THE USSR

Ch. I. The Characteristics of Forging Shops in USSR Plants [A.I. Zimin and
Ye.P. Unkov] 5

Ch. II. Methods of Calculating the Pressure for Forging in the Pressworking

Card 2/8

Present State of the (Cont.)	SOV/5799
of Metals [Ye.P. Unkov]	13
Ch. III. Die Forging on Forging Presses [V.P. Volkovitskiy]	22
Ch. IV. Die Forging on Horizontal Upsetters [I.I. Girsh, deceased]	31
Ch. V. Die Forging on Drop Hammers and [Power-Screw] Percussion Presses [Ya. M. Okhrimenko and V.P. Shcheglov]	41
Ch. VI. The Making of Forgings and Shaped Blanks in Forging Rolls [V.N. Martynov]	58
Ch. VII. Die-Sizing in Squeeze-Forming Presses [V.P. Volkovitskiy]	77
Ch. VIII. Rolling-Out Annular Blanks [Yu.L. Rozhdestvenskiy]	82
Ch. IX. The Manufacture of Metal Hardware on Pressworking Automatics [G.A. Navrotskiy]	93

Card 3/8

Present State of the (Cont.)	809/5799
Ch. X. Bending and Straightening of Sheets, Shapes, and Tubes [Ye.H. Moshain]	112
Ch. XI. Stamping From Sheets and Strips [S.L. Zlotnikov and G.N. Rovinskii]	119
Ch. XII. Automatic Pressworking Lines [S.L. Zlotnikov]	146
Ch. XIII. The Equipment of Blank-Producing Shops and Sections in Pressworking [P.V. Lobachev]	159
Ch. XIV. The Production of Blanks for [Machine] Parts by Helical Cross Rolling [B.P. Granovskii and Ye. A. Stosha]	175
Ch. XV. Metal Extrusion on Hydraulic Presses [A.I. Kagalovskii and L.A. Shofman]	188
Ch. XVI. Parts Forging From Light-Metal Alloys on Large Hydraulic Presses [L.D. Gol'man and L.A. Shofman]	201

Card 4/8

36

Present State of the (Cont.)	801/5799
Ch. XVII. Mass Production of Parts [Solid Wheels and Tires] by Forging With Subsequent Rolling [A.V. Altykis, and L.D. Gol'man]	208
Ch. XVIII. Forging and Bending of Plates [Ye.N. Moshnin]	216
Ch. XIX. Making Large Forgings on Hydraulic Presses [N.S. Dobrinskiy, and N.V. Tikhonirov]	229
Ch. XX. Drop-Hammer and Crank-Press Forging [D.I. Berezhkovskiy, and V.P. Shcheglov]	234
Bibliography	225

PRESSWORKING IN THE ChSSR

Ch. I. The Development of Metal Pressworking Processes in the Czechoslovakian Socialist Republic [F. Drustík, Railroad Engineering Institute, Prague]	261
---	-----

Card 5/8

36

Present State of the (Cont.)	SGI/5799
Ch. II. Making Large Forgings [B. Kreus, New Metallurgical Plant imeni Klement Gottwald, Kunčice]	272
Ch. III. The Forging of Rotors for Turbogenerators [J. Novák, Metallurgical Plant imeni Lenin, Plzeň]	299
Ch. IV. The Forging of Large Crankshafts [S. Burda, K. Poul, and M. Honz, Metallurgical Plant imeni Lenin, Plzeň]	314
Ch. V. Techniques Used in Forging Large Rotors [F. Zlatník, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	335
Ch. VI. The Forging of Forked Pipes for Gas Pipelines [J. Častka, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	345
Ch. VII. The Forging of Large Strengthening Rings for the Runnars of Mixed-Flow Turbines [F. Kukla, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	348

Card 6/8

36

Present State of the (Cont.)	SOV/5799
Ch. VIII. Scientific Research Work in the Field of Cold Impact Forging of Metals [F. Hrdzil, Plant imeni Šmeral, Brno]	355
Ch. IX. Experience in the Cold Impact Forging of Nonferrous Metals [K. Marvan and J. Odchmal, Plant Tesla, National Enterprise, Hloubětín, and V. Sindelák, Scientific Research Institute of Vacuum Electrical Engineering, Prague]	381
Ch. X. The Manufacturing Process and Organization in the Stamping of Bodies at the Automobile Plant "National Enterprise (AZNP) Mladá Boleslav" [Z. Kožval, AZNP, Mladá Boleslav]	397
Ch. XI. The Mechanization of Obsolete Enterprises as a Means of Increasing Labor Productivity [B. Šemmer, Vítkovice Metallurgical Plant imeni Klement Gottwald, Ostrava]	410
Ch. XII. The Initial Pressworking of FeAl Alloys and Large FeCrAl Castings [F. Major and J. Šolc, Scientific Research Institute of Iron, Prague].	

Card 7/8

- TSELIKOV, A.I.; GRANOVSKIY, S.P.; YEFANOV, V.I.

New technological process for the manufacture of blanks for hollow
car axles. Kuz. shtam. proizv. 3 no. 5:4-5 My '61. (MIRA 14:5)
(Rolling (Metalwork)) (Car axles)

S/793/62/000/000/005/006
A004/A126

AUTHORS:

Granovskiy, S.P., Candidate of Technical Sciences, Mayloris, O.S.
Mekhov, N.V., - Engineers

TITLE:

Performing and studying piercing and simultaneous drawing of tubes
on a laboratory three-high mill

SOURCE:

Teoriya prokatki; materialy konferentsii po teoreticheskim voprosam
prokatki. Moscow, Metallurgizdat, 1962, 701 - 710

TEXT: Tests were carried out at the VNIIMETMASH to study the possibilities
of piercing sleeves on a three-high mill and to compare this process between two
and three-high piercing mills. As a result of these tests, the process of pierc-
ing sleeves on a three-high mill was for the first time mastered in the USSR.
Hollow, water-cooled mandrels were used, which were hardsurfaced on their work-
ing area, the contact time between mandrel and blank was 25 - 30 sec, sleeves of
III X15 (ShKh15) carbon steel and 1X18H9T (1Kh18N9T) stainless steel 50 - 65 mm
in diameter having a wall thickness ranging from 2.5 - 12 mm were pierced. The
authors present data on the comparison between the surface quality of sleeves be-

Card 1/2

Performing and studying piercing and

S/793/62/000/000/005/006
A004/A126

ing pierced on two-high and three-high mills and compare the nonuniformity in the wall thickness of sleeves produced on two-high with those of three-high mills. They investigate the power and force parameters of the piercing process and describe in detail the development and investigation of the process of simultaneous piercing and drawing of thick-walled tubes, piercing and rolling of profiled tubes and piercing and rolling of thin-walled tubes on three-high mills. There are 6 figures and 5 tables.

ASSOCIATION: VNIIMETMASH

Card 2/2

L 8854-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/EWA(c) JD/RW

ACC NR: AP5026483

SOURCE CODE: UR/0286/65/000/019/0009/0009

INVENTOR: Granovskiy, S. P.; Pyatunin, A. I.; Yefanov, V. I.; Yakovlev, S. A.; Arutyunov, I. G.; Revunov, V. A.; Zemskov, A. A.; Shofman, L. A.

ORG: none 44.55 44.55 44.55 44.55 44.55 44.55

TITLE: Production of seamless tubes. Class 7, No. 175026. [Announced by All-Union Scientific Research and Design-Planning Institute of Metallurgical Equipment (Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut metallurgicheskogo mashinostroyeniya)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 9

TOPIC TAGS: tube, seamless tube, thin wall tube, light alloy tube, metall rolling

ABSTRACT: This Author Certificate introduces a method for making seamless tubes, e.g., light-alloy tubes from rolled, forged, or cast tube shells. To obtain thin-wall tubes of large diameter with precise dimensions and a clean surface, the tube shell is first hot rolled with expansion in a helical mill and then cold rolled with elongation in a helical rolling mill. [AZ]

SUB CODE: 13/ SUBM DATE: 12Feb64/ ATD PRESS: 4152

RVK
Card 1/1

UDC: 621.774.3

1 24740-66 EWT(m)/EWA(d)/EWP(t)/EWP(k) TIP(c) JD/HW
ACC NR: AP6005280 (N) SOURCE CODE: UR/0413/66/000/001/0018/0018

INVENTOR: Granovskiy, S. P.

ORG: none

TITLE: Production of thin-walled seamless pipe by helical rolling.
Class 7, No. 177397 18

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1,
1966, 18

TOPIC TAGS: pipe, seamless pipe, pipe rolling, rolling, helical
rolling

ABSTRACT: An Author Certificate has been issued describing a method
for making thin-walled seamless pipe by helical rolling from a heavy-
walled light-alloy billet in the hot condition; the billet is widened
and stretch-rolled. In order to produce large-diameter pipe with in-
ternal longitudinal ribs, the hot rolling is accomplished using a
conical mandrel with longitudinal grooves, whose bottom is set at an
angle slightly larger than that of the mandrel cone; the cold rolling
is made with a cylindrical mandrel with longitudinal grooves in which
the ribs are reduced in height and thickness by roller die plates.

SUB CODE: 13/ SUBM DATE: 07Jul64/

Card 1/1 *MPS* UDC: 621.774.8

29
B

2

L 7841-66 EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b)
ACC NR: AP5028121 IJP(c) JD/GG/WH SOURCE CODE: UR/0048/65/029/011/2064/2067

AUTHOR: Kramarov, O.P.; Sholokhovich, M.L.; Granovskiy, V.G.; Berberova, L.M.; Nikulina, V.P.

ORG: Rostov-on-the Don State University (Rostovskiy-na-Donu gosudarstvennyy universitet)

TITLE: Increase of the Curie point of ferroelectric materials by introduction of nonferroelectric dopants /Report, Fourth All-Union Conference on Ferro-electricity held at Rostov-on-the Don 12-16 September 1964/ III

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 11, 1965, 2064-2067

TOPIC TAGS: ferroelectric material, solid solution, dopant, barium titanate, zirconium, copper, silicon, dielectric constant, dielectric relaxation, Curie point.

ABSTRACT: The temperature dependence of the dielectric constant of BaTiO_3 and ferroelectric $(\text{Ba}, \text{Sr})\text{TiO}_3$ and $\text{Ba}(\text{Ti}, \text{Zr})\text{O}_3$ solid solutions containing up to 10 mole % of CaTiO_3 , BaSiO_3 , or CuTiO_3 ($\text{CuCO}_3 + \text{TiO}_2$) was measured at 10^3 and 10^6 cycle/sec in order to determine whether relaxation processes are involved in the apparent increase of the Curie temperature to which these nonferroelectric dopants are known to give rise. In all cases the dielectric constant was independent of frequency and the temperature at which it reached its maximum increased with increasing dopant content. The measurements on the BaTiO_3 - BaSiO_3 system were repeated with particular attention to the purity of the materials, cp BaTiO_3 synthesized by the oxalate method, cp BaCO_3 .

Card 1/2

ACC NR: AP5028121

and semiconductor-grade SiO_3 being employed. The Curie point of the cp BaTiO_3 was higher than that of the less pure material, but it was raised still higher by addition of the pure BaSiO_3 . It is concluded that relaxation processes are not involved, but that a true increase of the Curie point takes place. The ferroelectric nature of the dielectric constant maximum in the doped materials was confirmed by observation of the hysteresis loops. The addition of the nonferroelectric dopant lead in all cases to a broadening of the dielectric constant peak (diffusion of the phase transition) and in most cases to a reduction of the maximum value of the dielectric constant. The results are discussed briefly in terms of the theory of A.L.Khodakov and V.G.Granovskiy (Izv. vysh. uchebn. zaved, Fizika, No. 2, 118 (1962)). "Fictitious Curie points" are assigned to the dopants, from which their influence on the Curie point of the doped ferroelectric can be calculated. It is suggested that it may be possible to obtain ferroelectric solid solutions of nonferroelectric components homologous with BaTiO_3 . It is not possible, however, to characterize the effect of a dopant by any single property of the added ion as, e.g., its polarizability. Further investigation is desirable. Orig. art. has: 1 formula and 5 tables.

SUB CODE: SS, EM

SUBM DATE: 00/

ORIG. REF: 007 OTH. REF: 002

DW

Card 2/2

GRANOVSKIY, V.I.; ROZANOVA, N.B.; MOISEYeva, I.S.

Breakdown along the surface of a dielectric during the passage
of current from the opposite side. Zhur. tekhn. fiz. 28 no.5:1108-1117
My '58. (MIRA 11:6)

1. Lektrotekhnicheskiy institut im. L.I. Lenina, Moskva.
(Dielectrics) (Electric insulators and insulation)

SOV/137-58-10-20563

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 31 (USSR)

AUTHORS: Kocho, V.S., Granovskiy, V.I., Ploshchenko, Ye.A.

TITLE: An Investigation of the Thermal Functioning of Open-hearth Furnaces in Which Compressed Air is Delivered in the Checker Port (Issledovaniye teplovoy raboty martenovskikh pechey, rabotayushchikh s podachey szhatogo vozdukha v golovki)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 1, pp 112-116

ABSTRACT: 4000-4500 m³ compressed air from blast-furnace turbo-blowers is delivered per hour into the ends of the gas tank of the 220-t ovens at the Voroshilovsk Metallurgical Plant. The employment of compressed air improves the fuel combustion process, thus making it possible to reduce the excess-air coefficient from 1.5-1.8 to 1.05-1.15. Heating of the gas checkers is increased by 100-150°C. The tank-lining life is increased from 80 to 200 heats, and dust loss is reduced. The slag pockets require cleaning every 280-350 instead of 130-160 heats. The rate of C burn-off during the finishing period is 8 to 15% greater. When compressed air is employed, the melting

Card 1/2

SOV/137-58-10-20563

An Investigation of the Thermal Functioning of Open-hearth Furnaces (cont.)

period is 20 minutes shorter, and the working period 13 minutes. The unit consumption of fuel, in conventional units, is 13% less. Delivery of compressed air makes it possible to maintain higher heat inputs and obtain higher output rates from the furnaces. The heat intake of the bath rises by 40-60% with an air consumption of 2000 m³/hr, and even more at 4500 m³/hr. In the second half of the furnace, heat absorption declines when air is supplied, sometimes going to values close to zero. For a 250-500-t furnace, the optimum compressed-air delivery is 3000-5000 m³/hr; the precise amount requires determination by experiment in each individual instance.

G.G.

1. Open hearth furnaces--Operation 2. Open hearth furnaces--Thermodynamic properties
3. Oxygen--Applications

Card 2/2

SOV/137-58-11-22083

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 36 (USSR)

AUTHORS: Kocho, V. S., Granovskiy, V. I., Ploshchenko, Ye. A.

TITLE: Heat Balances of 500 and 250-t Gas-fired Open-hearth Furnaces
(Teplovyye balansy 500 i 250-t gazovykh martenovskikh pechey)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958,
Nr 3, pp 52-56

ABSTRACT: 500 and 250-t furnaces are heated by a mixture of coke and blast-furnace gas with an average thermal load of 36.8×10^{10} and 25.0×10^{10} kcal/hr. The hearth areas of the furnaces are, respectively, 96.76 and 74.0 m^2 , steel (St) production being 8.65 and 6.75 t/m per day and heat time 12.4 and 10.33 hours. The necessary calculations and tables are provided. The input and a portion of the output side depend upon the batch. The fundamental heat losses of 500 and 250-t furnaces are approximately identical; they consist of carry-off of heat and combustion products (30% and 33%, respectively) and loss in the cooling elements (12.24% and 13.7%). The remaining losses (by radiation, through the brickwork, etc.) are of somewhat smaller magnitude but they are greater in the 250-t furnace in virtually all

Card 1/2

SOV/137-58-11 22083

Heat Balances of 500 and 250-t Gas-fired Open-hearth Furnaces

cases. In accordance with the heat balances, the average unit consumption of conventional fuel is 123.6 kg/t for a 500- and 137 kg/t for a 250-t furnace. The greater efficiency of 500-t than of 250-t furnaces is due to the reduced heat loss per t of St, the better utilization of heat in the melting chamber, and the higher rate of steel production (by 50-65%).

V. G.

Card 2/2

GRANOVSKIY, V.I.

Sov/133/58-9-4/29

AUTHORS: Koch, V. S. (Dr.Tech.Sciences Professor), Granovskiy, V. I.,
(Engineer), and Ploshchenko, Ye. A. (Engineer)

TITLE: An Investigation of the Thermal Performance of a 500 Ton
Open Hearth Furnace (Issledovaniye teplovoy raboty 500-t
martenovskoy pechi)

PERIODICAL: 'Stal', 1958, Nr 9, pp 782-788 (USSR)

ABSTRACT: A study of the thermal performance of a 500 ton open
hearth furnace at the Voroshilov Works was carried out and
a comparison of some of the data obtained with corresponding
data for 250 ton furnaces is given. The object of the in-
vestigation was to obtain information on the possibilities
of improving the furnace performance as well as to obtain
some design data for 700-800 ton furnaces. The 500 and 250
ton furnaces were lined with basic refractories (mean ser-
vice life of chrome-magnesite roofs from 400 to 450 heats).
The furnaces were fired with a mixture of coke oven and
blast furnace gas carburized with fuel oil. Compressed air
was supplied (from blast furnace blowers) to the flame.
Material and thermal balances of the 500 ton furnace are

Card 1/4

Sov/133/58-9-4/29

An Investigation of the Thermal Performance of a 500 Ton Open Hearth Furnace

given in Tables 1 and 2 respectively. Heat absorption and the coefficient of utilization of heat were investigated using the method of "instantaneous reverse heat balance" which is based on measurements carried out during short time intervals. The dependence of the intensity of straight heat currents on the amount of compressed air supplied to the flame - Fig.1; the dependence of the coefficient of utilization of heat (A) and heat absorption (B) on the pressure under the roof during the individual smelting periods - Fig.2; the dependence of straight heat currents during the refining period on the coefficient of excess of air - Fig.3; the dependence of the coefficient of utilization of heat and coefficient of heat absorption on the thermal load, with a supply of compressed air of $4000 \text{ m}^3/\text{hr}$, during the individual smelting periods - Fig.4; the dependence of the duration of melting period on the specific heat consumption and on the concentration of carbon after melt out at various thermal loads - Fig.5; the dependence of the duration of the melting period and specific heat consumption on the concentration of carbon after melt out at various thermal loads - Fig.6. On the basis of the results obtained optimum thermal operating

Card 2/4

Sov/133/58-9-4/29

An Investigation of the Thermal Performance of a 500 Ton Open Hearth Furnace

conditions for the 500 ton furnace were established (Table 3) which decreased the consumption of conventional fuel from 125 to 108 kg/ton at a duration of heats not exceeding 11.5 hours. In view of relatively lower heat losses per ton of smelted steel, the consumption of fuel in 500 ton furnaces is somewhat lower (15-20 kg of conventional fuel) than in 250 ton furnaces. The use of compressed air has a positive effect on the thermal work of the 500 ton furnace, as it permits decreasing the coefficient of excess air to 0.9-1.05. At thermal loads of 35-40 mil. k cal/hr an average 5000 m³/hr of compressed air is required (varying the supply according to thermal loads during the individual smelting periods from 4000 to 5500 m³/hr). On the basis of the results obtained it can be expected that the character of the distribution of thermal currents and heat exchange conditions in 700-800 ton furnaces under design will be approximately the same as

Card 3/4

Sov/133/58-9-4/29

An Investigation of the Thermal Performance of a 500 Ton Open Hearth Furnace

in 500 ton furnaces. A decrease in specific heat losses in 700-800 ton furnaces should somewhat improve the coefficients of the utilization and absorption of heat in comparison with 500 ton furnaces. There are 3 tables, 6 figures and 5 Soviet references.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut i zavod im. Voroshilova (Kiev Polytechnical Institute and the Works im. Voroshilov)

Card 4/4

KOCHO, V.S.; GRANKOVSKIY, V.I.; LISITSA, V.K.

Automatic regulation of the combustion process. Metallurg 9 no.6:
15-17 Je '64.
(MIRA 17:9)

KOCHO, V.S.; GRANKOVSKIY, V.I.; KOCHETKOV, Ye.A.; ZAKHAROVA, Ye.V.

Distribution of combustion products in open-hearth furnace
regenerators. Izv. vys. ucheb. zav.; chern. met. 7 no.10:
149-154 '64. (MIRA 17:11)

1. Kiyevskiy politekhnicheskiy institut i Kommunarskiy metal-
lurgicheskiy zavod.

KOCHO, V.S.; GRANKOVSKIY, V.I.; PERELOMA, V.A.

Automatic pressure control in open-hearth furnaces. Izv.vys.
ucheb.zav.; chern. met. 8 no.4:212-215 '65.

1. Kiyevskiy politekhnicheskiy institut.

(MIRA 18:4)

24.7800 (1142, 1144)
24.7900 (1162, 1055)

84994

S/048/60/024/010/003/033
B013/B063

AUTHOR: Granovskiy, V. G.

TITLE: The Thermodynamics of Solid Solutions With Ferroelectric Properties

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 10, pp. 1184-1186

TEXT: The author tried to extend the results of the thermodynamic theory of barium titanate-like piezoelectric substances to the solid solutions of the respective substances with isomorphic ones. It was found that a solid solution with a concentration x_m has a number of extreme properties

if $a > 0$: lowest coercive force, lowest spontaneous polarization, highest dielectric constant, greatest steepness of the reversible characteristic, aside from a number of extreme ferroelectric properties (Ref. 1). It was established at the same time that an increase of a with $a > 0$ increases the maximum values of the mentioned physical quantities, or reduces the minimum values. a - constant of the solid solution, which determines the chemical composition of the latter. A quantitative checking of the

Card 1/2

The Thermodynamics of Solid Solutions With
Ferroelectric Properties

84994
S/046/60/024/010/003/033
B013/B063

formulas derived for the physical quantities concerned was very difficult due to the fact that experimental data were scattered over disparate publications. Still, it appears possible to make a provisional evaluation of the dielectric properties of solid solutions on the strength of results obtained. In the case of a phase transition of the second order, however, no definite conclusions can already be drawn as to the dependence of the dielectric properties of solid solutions on composition, because the dependence of the coefficient β on the latter has not yet been clarified. The author thanks A. L. Khodakov for having supervised the investigation. The present paper was read at the Third Conference on Piezoelectricity which took place in Moscow from January 25 to 30, 1960. There are 1 figure and 6 references: 5 Soviet. ✓

ASSOCIATION: Rostovskiy-na-Donu gos. univeristet
(Rostov-na-Donu State University)

Card 2/2

L 15245-65 EWT(1)/EPA(s)-2/EEC(b)-2 Pt-10 IJP(c)/AFWL/ASD(a)-5/SSD/AS(mp)-2/
ACCESSION NR: AR3010276 AFETR/ESD(gs)/ESD(t) S/0081/63/000/012.0061.0061

SOURCE: RZh. Khimiya, Abs. 12B381

AUTHOR: Granevskiy, V.G.

TITLE: The thermodynamics of solid solutions with a Perovskite-type structure which have piezoelectric properties

CITED SOURCE: Sb. Segnetoelektrike. Rostovak. un-t, 1961, 48-54

TOPIC TAGS: solid solution, Perovskite, piezoelectric property, polarization, electrostriction, phase transformation

TRANSLATION: This work is a continuation of that described in abstract 12B380. Formulas are derived which describe the dependence of spontaneous polarization, coefficient of electrostriction and the jump of the coefficient of linear expansion during the transition from the non-piezoelectric to the piezoelectric state on the composition of the solid solution. An expression is also derived for the temperature of the phase transition when the manifold pressure is a function of the concentration and pressure. Calculated and experimental curves are given which show the dependence on the concentration of the

Card 1/2

L 15245-65

ACCESSION NR: AR3010276

jump of the coefficient of linear expansion during phase transition into (Ba, Sr) TiO₃.
G. Liman

SUB CODE: TD

ENCL: 00

Cord 2/2

S/139/62/000/002/018/028
E039/E435

24.7700

AUTHORS:

Khodakov, A.L., Granovskiy, V.G.

TITLE:

On the thermodynamics of solid solutions with
perovskite type structure possessing ferroelectric
properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika.
no.2, 1962, 118-124

TEXT: In the search for ferroelectric materials with optimum
electrical characteristics it is often necessary to use solid
solutions possessing ferroelectric properties. In the case of
solid solutions of barium titanate with other titanates, stannates
and zirconates, by substituting the ions of titanium and barium
the structure of the crystal lattice can be changed and hence
their electrical properties altered. By examining phase
transitions of the first and second kind on the basis of the
thermodynamic theory of the ferroelectric effect it is possible to
obtain the concentration dependence of a series of electrical
parameters of solid solutions possessing ferroelectric properties.
The dependence of the temperature of the phase transition on

JB

Card 1/3